

# TYKATO<sup>®</sup> 480 EC



Reg. No./Nr. L10656, Act No./Wet Nr. 36 of/van 1947

Namibian Reg. No./Namibiese Reg. Nr N-AR 2061

**READ THE LABEL BEFORE USE**

**KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

A PRE-PLANT SELECTIVE SOIL INCORPORATED EMULSIFIABLE CONCENTRATE HERBICIDE FOR PRE-EMERGENCE CONTROL OF RYEGRASS IN BARLEY, CANOLA, OATS, TRITICALE AND WHEAT.

'N VOORPLANT SELEKTIEWE GROND-INGEWERKTE EMULGEERBARE KONSENTRAAT ONKRUIDDODER VIR VOOROPKOMS BEHEER VAN RAAIGRAS OP HAWER, GARS, KANOLA, KORING EN TRITIKALE.

|             |   |                          |
|-------------|---|--------------------------|
| GROUP/GROEP | 3 | HERBICIDE / ONKRUIDDODER |
|-------------|---|--------------------------|

**Active ingredient:**

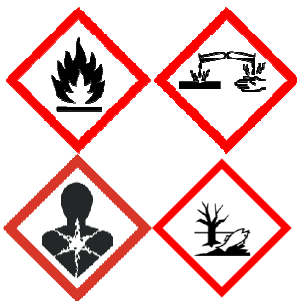
Trifluralin (dinitroaniline).....480 g/ℓ.....Trifluralin (dinitroanilien)

**Aktiewe bestanddeel:**

**Net Volume**

ℓ

**Netto Volume**



**DANGER**

**GHS Hazard Statements**

Flammable liquid and vapour.  
May be fatal if swallowed and enters airways.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause respiratory irritation  
May cause drowsiness or dizziness.  
Suspected of causing cancer.  
Very toxic to aquatic life with long lasting effects.

**GHS Precautionary Statements**

Keep away from heat, hot surfaces, open flames and other ignition sources (No smoking).  
Avoid breathing mist/ vapours/ spray.



**REGISTRATION HOLDER / REGISTRASIEHOUER:**

**Nulandis<sup>®</sup> (A division of AECI Limited)/ Nulandis<sup>®</sup> ('n Afdeling van AECI Beperk)**

Reg. No. / Nr. 1924/002590/06

P.O. Box / Posbus 14418

Witfield, 1467

Tel : (011) 823 8000

[www.aeciph.com/](http://www.aeciph.com/) [www.aeciworld.com](http://www.aeciworld.com)

IN CASE OF POISONING PLEASE PHONE / IN GEVAL VAN VERGIFTIGING SKAKEL :

0861 555777 / 082 446 8946

TYKATO<sup>®</sup> 480 EC is a registered trademark of AECI<sup>®</sup> Limited/'n geregistreerde handelsmerk van AECI<sup>®</sup> Beperk

**Batch No:**

**Lotnommer:**

**DATE OF MANUFACTURE:**

**VERVAARDIGINGSDATUM:**

**UN No. / VN Nr. 1993 FLAMMABLE LIQUID, N.O.S, (Light aromatic petroleum)**

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Namibian Reg. No. N-AR 2061

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|-------|---|-----------|
| GROUP | 3 | HERBICIDE |
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**Active ingredient:**

Trifluralin (dinitroaniline).....480 g/ℓ



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**WARNINGS:**

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Flammable liquid and vapour.  
May be fatal if swallowed and enters airways.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause respiratory irritation  
May cause drowsiness or dizziness.  
Suspected of causing cancer.  
Very toxic to aquatic life with long lasting effects.

Handle product with caution.

**FLAMMABLE** – keep away from heat and open flames.

When in contact, it may cause serious eye damage and skin irritation.

Avoid contact with skin since the product is an irritant and may cause allergic reaction.

Store away in a cool, dry, well-ventilated place, away from food, feed, seed, fertilizers and other agricultural remedies.

Keep out reach of children, uninformed persons and animals.

Re-entry: Do not enter treated area until spray deposit has dried unless wearing protective clothing. In case of poisoning – CALL A DOCTOR AND MAKE THIS LABEL AVAILABLE TO HIM/HER.

ALTHOUGH THIS REMEDY HAS BEEN EXTENSIVELY TESTED UNDER A LARGE VARIETY OF CONDITIONS THE REGISTRATION HOLDER DOES NOT WARRANT THAT IT WILL BE EFFICACIOUS UNDER ALL CONDITIONS BECAUSE THE ACTION AND EFFECT THEREOF MAY BE AFFECTED BY FACTORS SUCH AS ABNORMAL CLIMATIC AND STORAGE CONDITIONS; QUALITY OF DILUTION WATER; COMPATIBILITY WITH OTHER SUBSTANCES NOT INDICATED ON THE LABEL AND THE OCCURRENCE OF RESISTANCE OF WEEDS AGAINST THE REMEDY CONCERNED AS WELL AS BY THE METHOD, TIME AND ACCURACY OF APPLICATION. THE REGISTRATION HOLDER FURTHERMORE DOES NOT ACCEPT RESPONSIBILITY FOR DAMAGE TO CROPS, VEGETATION, THE ENVIRONMENT OR HARM TO MAN OR ANIMAL OR FOR LACK OF PERFORMANCE OF THE REMEDY CONCERNED DUE TO FAILURE OF THE USER TO FOLLOW THE LABEL INSTRUCTIONS OR TO THE OCCURRENCE OF CONDITIONS, WHICH COULD NOT HAVE BEEN FORESEEN IN TERMS OF THE REGISTRATION. CONSULT THE REGISTRATION HOLDER IN THE EVENT OF ANY UNCERTAINTY.

#### **PRECAUTIONS:**

##### **GHS Precautionary Statements**

###### **General:**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

###### **Prevention:**

Obtain, read, and follow all safety instructions before use.

Keep away from heat, hot surfaces, open flames, and other ignition sources. No smoking.

Keep container tightly closed

Ground and bond container and receiving equipment.

Use explosion proof electrical, lighting and ventilation equipment.

Use non-sparking tools

Take action to prevent static discharge.

Avoid breathing mist/ vapours/ spray.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Wear protective gloves, protective clothing, eye, and face protection.

Wash hands and face thoroughly after handling. Do not touch eyes.

###### **Response:**

Get medical help

If exposed or concerned, get medical advice.

Do NOT induce vomiting.

Collect spillage.

IF SWALLOWED: Get emergency medical help immediately.

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Take off contaminated clothing and wash it before reuse.

In case of fire: Use the fire-fighting equipment available to extinguish.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water under the safety shower.

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

###### **Storage:**

Store locked up.

Store in a well-ventilated place.

Keep container tightly closed and cool.

###### **Disposal:**

Dispose of contents/container to a licensed hazardous waste facility in accordance with local and national regulations.

Avoid skin and eye contact.

In case of accidental contact with skin wash immediately with plenty of water. In the event of accidental eye contact rinse cautiously with water for several minutes and flush eyes with clean water and get medical attention, if necessary.

Prevent contamination of food, feed, drinking water and eating utensils.

Prevent spray drift onto other crops, grazing, rivers, dams or areas not under treatment.

Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.

Triple rinse the empty container: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler ([www.croplife.co.za](http://www.croplife.co.za)). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

#### RELEVANT SUBSTANCES:

| Substance name<br>(IUPAC/EC)      | CAS – No.   | Concentration<br>% By weight | Classification                                                                                                                                                                                                                            |
|-----------------------------------|-------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | EC – No.    |                              |                                                                                                                                                                                                                                           |
| Trifluralin                       | 1582-09-8   | 40-50%                       | Respiratory/Skin Sensitization (Category 1). Carcinogenicity (Category 2). Aquatic Toxicity Acute (Category 1). Aquatic Toxicity Chronic (Category 1). M Factors Acute and Chronic = 10.                                                  |
|                                   | 216-428-8   |                              |                                                                                                                                                                                                                                           |
| Light aromatic petroleum          | 64742-95-6  | 40- 50%                      | Flammable Liquid (Category 3) Aspiration Hazard (Category 1) Skin Corrosion/Irritation (Category 3) STOT SE (Category 3) Respiratory Tract. Narcotics effect. Aquatic Toxicity Acute (Category 2). Aquatic Toxicity Chronic (Category 2). |
|                                   | 265-199-0   |                              |                                                                                                                                                                                                                                           |
|                                   | 257-842-9   |                              |                                                                                                                                                                                                                                           |
| Calcium dodecylbenzene sulphonate | 90194-26-6  | <10%                         | Serious Eye Damage/Irritation (Category 1). Skin Corrosion/Irritation (Category 2). Aquatic Toxicity Chronic (Category 3).                                                                                                                |
|                                   | 290-635-1   |                              |                                                                                                                                                                                                                                           |
| Coconut diethanolamide            | 8051-30-7   | <5%                          | Skin Corrosion/Irritation (Category 2). Serious Eye Damage/Irritation (Category 1). Aquatic Toxicity Chronic (Category 2).                                                                                                                |
|                                   | 232-483-0   |                              |                                                                                                                                                                                                                                           |
| Alcohols, C9-11, ethoxylated      | 160901-09-7 | <5%                          | Acute Toxicity Oral (Category 4). Serious Eye Damage/Irritation (Category 1).                                                                                                                                                             |
|                                   | 68439-46-3  |                              |                                                                                                                                                                                                                                           |
| Isobutanol                        | 78-83-1     | <5%                          | Flammable Liquid (Category 3). Skin Corrosion/Irritation (Category 2). Serious Eyes Damage/Irritation (Category 1). STOT SE (Category 3). Respiratory Tract and Central Nervous System.                                                   |
|                                   | 201-148-0   |                              |                                                                                                                                                                                                                                           |

**NOTE:** The other ingredients not included above, do not cause or contribute towards the correct GHS classification of **TYKATO 480 EC** and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021; Regulation 14(b), not listed.

## **FIRST AID:**

**In case of inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT give mouth-to-mouth resuscitation if victim ingested or inhaled the substance. Keep person at rest and warm. Transfer the patient to the nearest hospital/clinic for medical attention as soon as possible

**In case of skin contact:** In case of contact, remove any contaminated clothing and shoes. Flush skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Medical attention is recommended if irritation occurs and persists.

**In case of eye contact:** Check for and remove any contact lenses. In case of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Cold water may be used. Obtain immediate medical attention.

**In case of ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If conscious, rinse mouth thoroughly with water. Loosen tight clothing such as a collar, tie, belt, or waistband. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Refer for immediate medical attention without delay.

## **Indication of any immediate medical attention and special treatment needed:**

Treat symptomatically and supportively.

## **RESISTANCE WARNING:**

For resistance management, **TYKATO 480 EC** is a group code 3 herbicide. Any weed population may contain individuals naturally resistant to **TYKATO 480 EC** and other group code 3 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. The resistant weeds may not be controlled by **TYKATO 480 EC** or any other group code 3 herbicides.

To delay herbicide resistance:

- Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with registered products from different herbicide group codes.
- Integrate other control methods (chemical, cultural, biological) into weed control programmes.

For specific information on resistance management contact the registration holder of this product

## **MODE OF ACTION:**

The mode of action for trifluralin is by inhibition of microtubule assembly.

## **USE RESTRICTIONS:**

In addition to the crops mentioned in the “Application Table” below, the following crops may also be planted directly after a treated field has been harvested: Beet, *Brassicaceae*, Carrots, Castor Oil, Celery, Cowpeas, Cucurbits, Fruit Trees, Mint, Ocra, Potatoes, Safflower, Sugarcane and Tomatoes.

All other crops require a waiting period of at least 12 months between treatment and planting, except for Grain sorghum which requires a waiting period of 18 months.

Periods of cold weather after planting may lead to phytotoxicity in the crop, e.g. in the case of early season plantings.

**TYKATO 480 EC** can be used in the crops listed in the “Application Table”, if the following conditions are adhered to;

- Do not use **TYKATO 480 EC** in areas with steep sloped where the possibility exist that treated soil may roll into the plant row.
- Do not use in very stony areas.
- **TYKATO 480 EC** is an excellent graminicide and must be removed completely from the plant row before planting. Failure to do this may lead to crop damage.
- Ensure that the planter throws the **TYKATO 480 EC** treated soil away from the plant row to cover the inter-row areas. Care should be taken to ensure that the planting speed and row spacing is such that the inter-row is covered by the soil that is removed from the row, but that the treated soil is not thrown back into the next plant row.
- Apply **TYKATO 480 EC** on a well prepared seedbed, free of excessive plant material and clods.

**DIRECTIONS FOR USE:** USE ONLY AS DIRECTED

**COMPATIBILITY:**

The full range of compatibility of **TYKATO 480 EC** with other agricultural remedies is not known. It is advisable to carry out a physical compatibility test prior to application, before **TYKATO 480 EC** is tank-mixed with any agricultural remedy. Consult with your Nulandis distributor in this regard.

**APPLICATION INSTRUCTIONS:**

**TYKATO 480 EC** is easily decomposed by sunlight and must therefore be incorporated into the soil immediately (within 10 minutes) after it has been sprayed evenly onto the surface in a minimum of 200 litres water / ha. The most advantageous method is to mount the spray boom in front of the tractor and pull a disc harrow with the same tractor. It is important to incorporate very thoroughly into the top 5 to 10 cm of the soil. Set the discs to penetrate to a depth of 10 to 15 cm.

Shallow incorporation with implements set to cut less than 5 cm deep, may give erratic weed control.

Thorough incorporation may be achieved with P.T.O. driven rotary tillers or an offset or tandem disc (alone or with spike-tooth harrow in tandem), disking the field twice, the second time at right angles with the first time. The tractor speed must be consistent and allow for even distribution.

It is important that clods should be broken up because the weed seeds in untreated clods may germinate uninjured.

**TYKATO 480 EC** has a long residual action and may be incorporated at any convenient time from 2 to 3 weeks before planting time, before the rush autumn season starts up to the day of planting.

**TYKATO 480 EC** will not leach out of the soil, not even under conditions of high rainfall or irrigation.

**IMPORTANT NOTES:**

**TYKATO 480 EC** is an emulsifiable concentrate that requires mixing with water and is applied as a spray. **TYKATO 480 EC** is a residual, soil-incorporated herbicide which controls *Lolium* sp. by destroying germinating weeds. Established weeds are not controlled.

Weeds that have emerged before sowing can be sprayed with **ERASE 360 SL** (Reg. No. L6206) and/or **ERASE GRANULE** (Reg. No. L7948).

Spraying can, however, also take place separately directly ahead of the planter.

Where minimum tillage is practiced stubble should be burned before application/planting.

As established weeds are not controlled, lands should be free from weeds when **TYKATO 480 EC** is applied.

**APPLICATION TABLE:**

| CROP                                 | SOIL TYPE –<br>CLAY %         | DOSAGE /<br>HA                 | REMARKS                                                                                                                                                                                                                                                                                                                |
|--------------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CANOLA                               | 0 – 10 %<br>11 – 20%<br>>20 % | 1,0 ℓ<br>1.5 ℓ<br>2.0 ℓ        | Apply <b>before</b> planting or sowing and incorporate into the soil within 10 minutes of application for the control of <i>Lolium</i> sp. (Ryegrass).                                                                                                                                                                 |
| WHEAT<br>BARLEY<br>OATS<br>TRITICALE | 0 – 25%<br><br>>25%           | 1.0 – 2.0 ℓ<br><br>1.5 – 2.0 ℓ | Apply as an overall application and incorporate into the soil within 10 minutes of application for the control of <i>Lolium</i> sp. (Ryegrass).<br><b>NB: DO NOT use in fields which have already been sown with seed but ONLY in fields which are to be planted.</b><br><b>Not suited for surface broadcast sown.</b> |

ERASE 360 SL and ERASE GRANULE are the registered tradenames of Nulandis® (A division of AECI Ltd.)